

Applicant: James Carnazza  
For: Methods for Testing for and Inhibiting the Development of Huntington's Disease

1           1.       A method for inhibiting the development of Huntington's disease in an individual  
2 who is at risk of developing the disease, comprising the steps of:

3               determining that the individual exhibits a trinucleotide repeat pattern, consisting of  
4 cytosine, adenine, and guanine, is of a sufficient number to indicate a risk for developing  
5 Huntington's disease;

6               establishing that a serum level of a preselected hormone in said individual is below  
7 normal;

8               administering one or more hormones, selected from a group consisting of estrogen,  
9 testosterone, their respective precursors, and esters of estrogen, testosterone, and their respective  
10 precursors, in amounts sufficient to inhibit development of the disease.

1           2.       The method of claim 1, wherein said individual exhibits an expanded trinucleotide  
2 repeat pattern greater than 38.

1           3.       The method of claim 1, wherein said individual exhibits an expanded trinucleotide  
2 repeat pattern equal to or greater than 43.

1           4.       The method claim 1, wherein said trinucleotide repeat pattern is equal to or  
2 greater than 63.

1           5.       The method of claim 1, wherein said individual exhibits a huntingtin  
2 polyglutamine protein comprising greater than 38 glutamines.

1           6.       The method of claim 1, further comprising the step of predetermining the rate at  
2 which one or more of said hormones binds to a polyglutamine located at an end of said

3    huntingtin polyglutamine protein to determine an optimum time to begin said administering step  
4    and said sufficient amount of said one or more hormones.

1            7.        The method of claim 6, wherein said predetermining step comprises the steps of,  
2                      obtaining one or more samples of a huntingtin polyglutamine protein with known  
3                      numbers of glutamines;  
4                      mixing said sample with a labeled estradiol source and a buffering solution;  
5                      measuring the binding affinity of the labeled estradiol source to the huntingtin  
6                      polyglutamine protein..

1            8.        The method of claim 6, wherein said affinity is measured with a gamma counter  
2    and is equal to or less than about 50,000 counts per minute.

1            9.        A method for determining the optimum time for administering a hormone  
2    treatment to inhibit the development of Huntington's disease in an individual who is at risk of  
3    developing the disease, comprising the steps of:

4                      determining a plurality of binding affinities of estradiol to a huntingtin  
5                      polyglutamine protein with known numbers of glutamines; and  
6                      measuring the serum level of hormone in said individual to determine if said  
7                      serum level is below normal.

1            10.      The method of claim 9, wherein said affinity is equal to or less than about 50,000  
2    per minute.

1            11.      The method of claim 9, wherein said affinity is equal to or less than about 40,000  
2    counts per minute.

- 1            12.    The method of claim 9, wherein said mixing step further comprises mixing said
- 2    labeled hormone source with a buffering solution.